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ARRANGEMENT IN A NETWORK SWITCH FOR PRIORITIZING DATA FRAMES BASED ON USER-DEFINED FRAME ATTRIBUTES

ABSTRACT OF THE DISCLOSURE

A network switch includes network switch ports, each including a port filter configured for detecting user-selected attributes from a received layer 2 type data frame. Each port filter, upon detecting a user-selected attribute in a received layer 2 type data frame, sends a signal to a switching module indicating the determined presence of the user-selected attribute, enabling the switching

5 module to generate a switching decision based on the corresponding user-selected attribute and based on a corresponding user-defined switching policy. The switching policy may specify a priority class, or a guaranteed quality of service (e.g., a guaranteed bandwidth), ensuring that the received layer 2 type data frame receives the appropriate switching support. The user-selected attributes for the port filter and the user-defined switching policy for the switching module are programmed by a host

10 processor. Hence, the integrated network switch is able to perform advanced switching operations for layer 2 type data packets to ensure quality of service requirements, independent of priority information specified in the layer 2 type data packets, based on the user-selected attributes in the layer 2 type data packets and the user-defined switching policies established for the switching module.